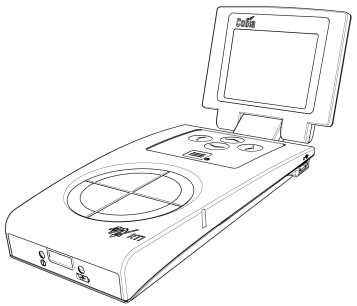
User Manual

Cobia Smart R/F & Cobia Dental Intraoral

English - v2014.3A



RTI

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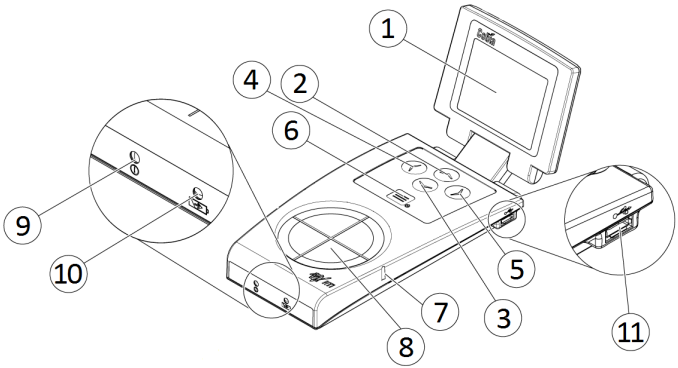
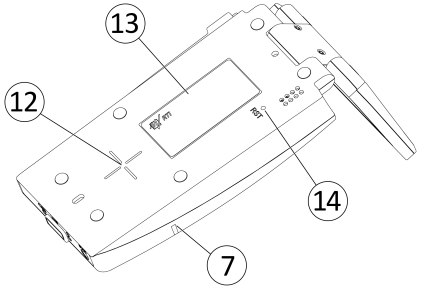
1 Product Overview



TOP VIEW

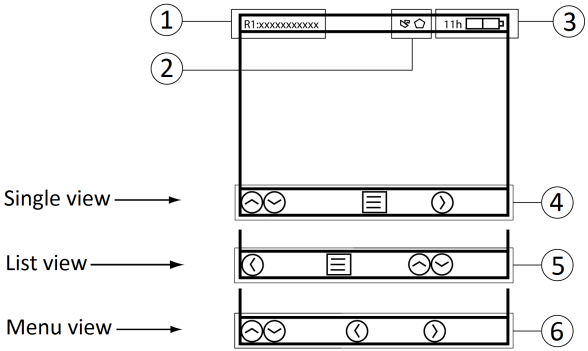


BOTTOM VIEW

#	Name	Description
1	Display	Cobia display. See section *Screen Description* 6
2	Up arrow button	Used to move up in the user interface. See section *Keyboard Operation* 8
3	Down arrow button	Used to move down in the user interface. See section *Keyboard Operation* 8
4	Left arrow button	Used to move left/back in the user interface. See section *Keyboard Operation* 8
5	Right arrow button	Used to move right or make a selection in the user interface. See section *Keyboard Operation* 8
6	Menu and On/Off button	Used to start and power off the Cobia, and display the system menu. See section *Keyboard Operation* 8
7	Positioning marker	Marks the depth of the radiation measurement surface
8	Measurement surface	Circular entrance surface for the measurement sensors
9	Status indicator	Indicates functional status of the Cobia
10	Battery charging indicator	The orange battery charging indicator is lit when the battery is charging. See section *Battery Charging Details* 11
11	Micro-USB connector	Used both to charge and to connect the Cobia to a computer for system updates. See sections *Charging the Battery* 9 *and Updating the System* 11
12	Measurement center marking	Marks the center position of the radiation measurement on the bottom side
13	Product label	Displays detailed information about the product and model (on the bottom side)
14	Reset hole	Used to do a hardware reset of the Cobia. Marked "RST"(on the bottom side)

1.1 User Interface

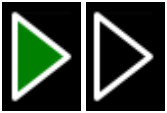
1.1.1 Screen Description



A status field is displayed at the top of the screen. The left side of the field shows the Radiation or Measurement Quality Code and a description of the active range (1).The middle part of the field displays icons for when power is supplied and when an external probe and/or internal MAS cable is attached as well as warning symbols for when any settings are set to non-standard values (2). The right side of the field displays an icon for external power supply and an indicator for the battery level (3).
At the bottom of the screen a simple user guide is displayed. For each view, the buttons that are functional in this view are shown, together with a short text describing the function of the buttons (4-6).

Single view
In single view, only one active parameter is displayed, represented by the value and its unit. Each unit is shown by a specific color. Pressing the up / down arrow buttons will change the active parameter.
When using the internal tube current socket (MAS) or an external detector (EXT) an indicator will appear in the leftmost side of the unit field (not shown).

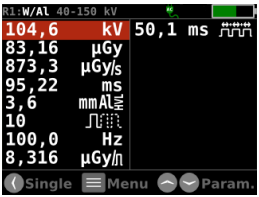
Located to the left of the value, two symbols may be visible:



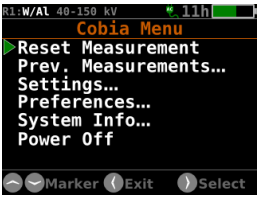
1. A play symbol (triangle) is visible during the measurement. It is filled (green) during the radiation detection, and will then stay contoured while the Cobia accepts continued measurement during Restart Delay.

1B. When using the optional parameter cycling, a rotating indicator will appear just above the play symbol.

2. A pulse indicator is shown below the play symbol. This indicator is turned on when pulses are detected, resulting in display of additional pulse parameters.



List view
In the List view, all the available parameters are shown simultaneously. The active parameter (displayed in Single view) is indicated in color.
If a measurement is started when the Cobia is in List view, the display will switch to Single view during the measurement and then return to List view after completion.
Note! The available parameters may vary depending on the model of the Cobia. The example picture shows a pulsed measurement with Cobia Flex R/F kV & Dose.



Main Menu view
The Menu view displays a set of available functions, selected by pressing the right arrow button. *Reset Measurement* zeroes and resets the meaurement. *Prev. Measurements* recalls the results of earlier measurements. *Settings* is for viewing and modifying the measurement settings. *Preferences* is for viewing and adjusting personal preferences. Any setting change that can

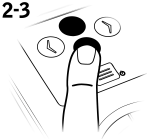
affect the measurement results will be shown in the status field (top of screen). *System Info* gives detailed information about the Cobia, needed during support. *Power Off* turns the Cobia off.

1.1.2 Keyboard Operation

1

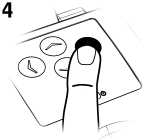
Menu and On/Off button
If Power = Off: Press once to start the Cobia
If Power = On: Press once to display the menu. Press and hold to switch off the Cobia
In Menu: Closes the menu

2-3



Up and Down arrow buttons
In Single view: Changes the active parameter shown.
In List view: Changes the highlighted (active) parameter
In Menu: Moves the marker

4



Right arrow button
In Single view: Switches the display to List view
In Menu: Activates the marked menu item
In Setting or Preferences menus: Changes the set value (displayed in yellow) or activates the menu item

5

Left arrow button
In List view: Switches the display back to Single view
In Menu: switches the display back to the previous menu or screen

2 Getting Started

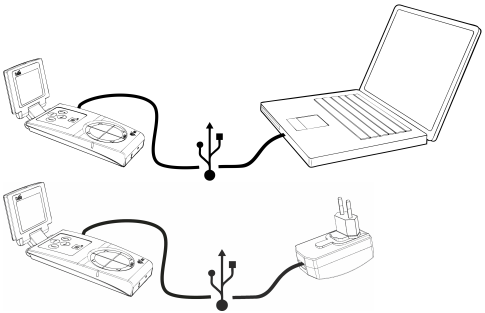
2.1 Before Starting the Cobia for the First Time

Before using the Cobia for the first time, the unit has to be charged for 16 hours. See *Charging the Battery* 9 .

2.2 Charging the Battery

The battery can be charged in two ways:

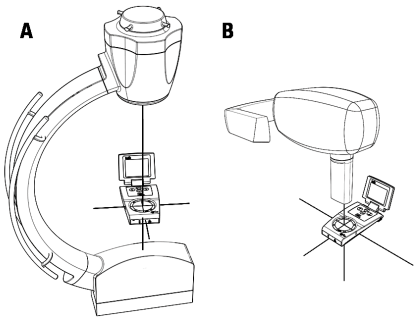
- Via the USB cable connected to a PC.
- Via the USB cable connected to the included external charger.



3 Performing a Measurement

3.1 Measuring with the Internal Detector

The pictures below show how to position the Cobia in different types of X-ray units.



A = Radiography X-ray unit B = Dental X-ray unit

1. Start the X-ray unit.
2. Prepare the X-ray unit for test of desired settings.
3. Start the Cobia.
4. Place the Cobia under the X-ray source at a clinically relevant distance (typically 50 - 100 cm from the source).
5. Make sure that the radiation field covers (at least) the entire Cobia detector surface.
6. Start an exposure.
7. When the measurement is over, the recorded values are by default cycled on the Cobia display. Press the Right arrow button to go to the List view for an overview.
8. Compare the parameters displayed by the Cobia with the test settings for the X-ray unit.
9. Record the results.
10. To repeat, adjust settings and start over from Step 6.

4 Maintenance

4.1 Scheduled Calibration

RTI recommends that the Cobia is recalibrated every 24 months. Send your Cobia to your local RTI distributor, who will send it to our service department in Mölndal, Sweden, or New Jersey, USA. For contact details, please see the back of this manual or the list of local RTI distributors on the RTI website (www.rti.se).

4.2 Updating the System

Updates can be performed by the user. The system firmware or software is updated by downloading the latest versions from www.rti.se/downloads. Instructions are included in the download or can be found in the reference manual.

4.3 Changing the Battery

The battery is a customized rechargeable battery. That can only be replaced by RTI authorized service centers.

5 Technical Data

5.1 Battery Charging Details

The section *Charging the Battery* 9 describes how the Cobia battery is charged.

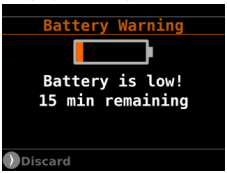
On the front face of the Cobia, there is an orange battery charging indicator, marked . The indicator is lit when the battery is actively charging. It will gradually turn off when the battery is getting closer to fully charged.Charging is possible also when the Cobia is powered off.

Approximate battery charging times:

Capacity	Using power supply	Computer USB, Cobia ON	Computer USB, Cobia OFF
100%	5 h	8.5 h	32 h
90%	3.5 h	7 h	30 h
80%	2.5 h	6 h	27 h
50%	1.5 h	3.5 h	17 h

5.2 Battery Warnings

When the battery is starting to run low, warnings are shown (see below). After the second warning the system can shut down suddenly, due to an empty battery.



6 Troubleshooting

If experiencing problems with the Cobia, please go through the following steps before contacting your local RTI distributor or RTI Electronics:

A. Check the RTI website for system updates (www.rti.se).

B. Go through the checklist below.

The Cobia does not start:
If the Cobia does not start, try the following: Connect the charger and retry to start the Cobia. If it does start, the battery was too low to start. If this does not help, try to reset the Cobia as described below.

The Cobia indicates a dose lower than anticipated:
If the dose readings are too low or if the irradiation times for short exposures are too short check that the measurement is performed so that the radiation is perpendicular to the Cobia detector surface. Please also make sure that the entire surface is evenly irradiated.

The Cobia gives "Field Error":
The Cobia detector surface needs to be properly irradiated. Please make sure that the entire surface is irradiated, and that nothing is blocking the radiation.

How do I reset the Cobia?

There is a reset hole on the bottom face of the Cobia, marked RST. Insert the end of a paper clip or similar to reset the Cobia.

7 Standards and Compliances

For standards and compliances, see the Reference Manual.

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